CLAIMS

[1]   A particular program detection device for detecting a particular program segment in a program signal including at least audio data of a program, the device comprising:

5   a noise level detecting section operable to detect a noise level of the audio data included in the program signal;

a detection sensitivity determining section operable to determine a detection sensitivity which is used when a particular program is detected, based on the noise level detected by the noise

10   level detecting section;

a silent portion detecting section operable to detect a silent portion of the audio data included in the program signal in accordance with the detection sensitivity determined by the detection sensitivity determining section; and

15   a particular program determining section operable to determine a time interval between each silent portion detected by the silent portion detecting section to determine a particular program segment.

20   [2]   The particular program detection device according to claim 1, further comprising:

a noise level learning section operable to learn association of the noise level detected by the noise level detecting section with a noise level which has been detected in the past;

25   and

a noise level storing section operable to store a noise level learnt by the noise level learning section,

wherein the detection sensitivity determining section determines a detection sensitivity which is used when a particular

5   program is detected, based on the learnt noise level stored in the noise level storing section.

[3]   The particular program detection device according to claim 2, further comprising a program information obtaining section

10   operable to obtain program information from the program signal,

wherein the noise level storing section stores the noise level learnt by the noise level learning section in association with the program information obtained by the program information obtaining section, and

15   the detection sensitivity determining section obtains the learnt noise level associated with the program information from the noise level storing section in accordance with the program information obtained by the program information obtaining section, and determines the learnt noise level as a detection sensitivity

20   which is used when a particular program is detected.

[4]   The particular program detection device according to claim 1, further comprising a broadcast reception section operable to receive broadcast waves carried in the program signal, and output

25   the received program signal to the noise level detecting section

and the silent portion detecting section.

[5]   The particular program detection device according to claim 1, further comprising a data read section operable to read the program signal from a storage device in which the program signal is recorded, and output the read program signal to the noise level detecting section and the silent portion detecting section.

[6]   The particular program detection device according to claim 1, wherein the silent portion detecting section subjects a minimum value of the audio data included in the program signal to a minimum hold process.

[7]   The particular program detection device according to claim 6, wherein, when a particular program is a CM, a time constant which causes a minimum hold value to increase is determined so that the minimum hold value is clipped to a predetermined value in 15 seconds which is a minimum time which can be taken by a CM.

[8]   A particular program detection method which is executed by a device for detecting a particular program segment in a program signal including at least audio data of a program, the method comprising the steps of:

detecting a noise level of the audio data included in the program signal;

determining a detection sensitivity which is used when a particular program is detected, based on the detected noise level;

detecting a silent portion of the audio data included in the program signal in accordance with the determined detection

5 sensitivity; and

determining a time interval between each detected silent portion to determine a particular program segment.

[9]   A computer recordable program which causes a particular

10 program detection device to execute a method of detecting a particular program segment in a program signal including at least audio data of a program, the program causing the particular program detection device to execute the steps of:

detecting a noise level of the audio data included in

15 the program signal;

determining a detection sensitivity which is used when a particular program is detected, based on the detected noise level;

detecting a silent portion of the audio data included in the program signal in accordance with the determined detection

20 sensitivity; and

determining a time interval between each detected silent portion to determine a particular program segment.

[10]   An integrated circuit for use in a particular program

25 detection device for detecting a particular program segment in

a program signal including at least audio data of a program, wherein circuits functioning as the following sections are integrated:

a noise level detecting section operable to detect a noise level of the audio data included in the program signal;

5   a detection sensitivity determining section operable to determine a detection sensitivity which is used when a particular program is detected, based on the noise level detected by the noise level detecting section;

a silent portion detecting section operable to detect

10   a silent portion of the audio data included in the program signal in accordance with the detection sensitivity determined by the detection sensitivity determining section; and

a particular program determining section operable to determine a time interval between each silent portion detected

15   by the silent portion detecting section to determine a particular program segment.